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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,702	12/02/2004	Andreas A Popp	29827/40663	6743

4743 7590 04/19/2007

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EXAMINER	
CHEUNG, WILLIAM K	
ART UNIT	**PAPER NUMBER**
1713	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,702	POPP ET AL.	
	Examiner	Art Unit	
	William K. Cheung	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-8,10-18,21-23,25-27 and 29-34* is/are pending in the application.

4a) Of the above claim(s) *25 and 31* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-8, 10-18, 21-23, 26, 27, 29, 30, 32-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *051905*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election with traverse of Group I on February 5, 2007 in Paper with traverse is acknowledged. The traversal is on the ground(s) that both group I and II. This is not found persuasive because the group I and II inventions do not share the same inventive features.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1, 4-8, 10-18, 21-23, 25-27, 29-34 are pending. Claims 25, 31 are drawn to non-elected subject matter. Claims 1, 4-8, 10-18, 21-23, 26, 27, 29, 30, 32-34 are examined with merit.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 4-8, 10-18, 21-23, 26, 27, 29, 30, 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 (line 16-18), the recitation "m1 + m2 + m3 + n1 + n2 + n3", "m1 + m2 + m3", "p1 + p2 + p3" are considered indefinite. What does "+" mean? Does the recited "+" mean a "comma", an "and", or the "sum of"?

Claim 4 (line 2-3), the recitation "m1 + m2 + m3 + n1 + n2 + n3", "m1 + m2 + m3", "p1 + p2 + p3" are considered indefinite. What does "+" mean? Does the recited "+" mean a "comma", an "and", or the "sum of"?

Claim 14 (line 12), the recitation "p1 + p2 + p3" is considered indefinite. What does "+" mean? Does the recited "+" mean a "comma", an "and", or the "sum of"?

Claim 18 (line 13), the recitation "p1 + p2 + p3" is considered indefinite. What does "+" mean? Does the recited "+" mean a "comma", an "and", or the "sum of"?

Claim 21 (line 11), the recitation "p1 + p2 + p3" is considered indefinite. What does "+" mean? Does the recited "+" mean a "comma", an "and", or the "sum of"?

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsui et al. (EP 0 777 287 A2).

The invention of claims 1, 4-6 relates to an ester F of formula Ia, Ib, Ic, wherein AO is for each AO independently EO or PO, EO is O-CH2-CH2-,

PO is at each instance independently O-CH2-CH(CH3)- or O-CH(CH3)-CH2-

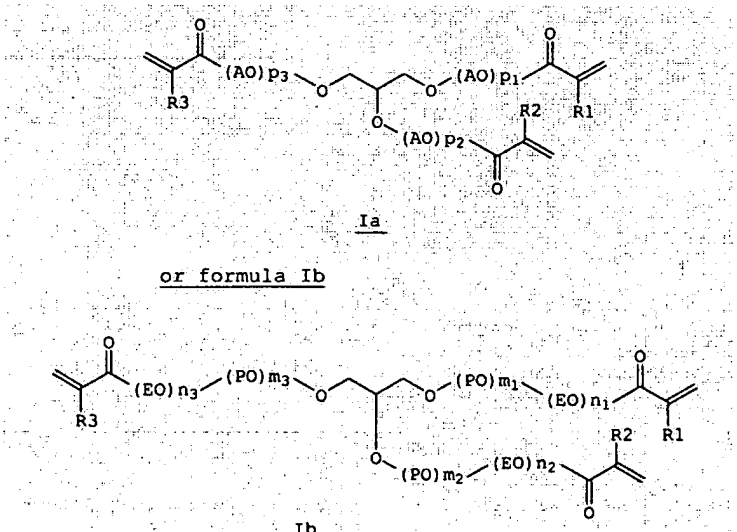
m1 + m2 + m3 + n1 + n2 + n3 is 3, 4, or 5,

m1 + m2 + m3 is I, 2, 3, or 4,

p1 + p2 + p3 is 3, 4, or 5, and

R1, R2, and R3 are independently H or CH3,

wherein at least one AO is PO and at least one further AO is EO.

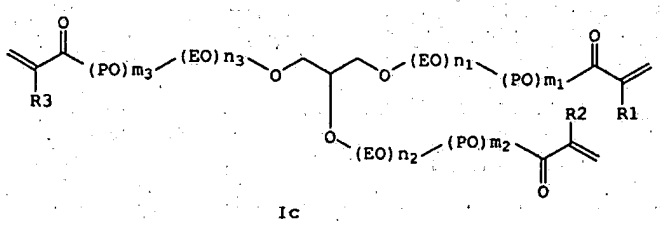


Ia

or formula Ib

Ib

or formula Ic



Ic

Matsui et al. (abstract) disclose formula (2) that is substantially the ester F as claimed. Claims 1, 4-6 are anticipated.

7. Claims 7, 8, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Barthold et al. (US 5,472,617).

The invention of claims 7, 8, 10 relates to a process for preparing an ester F of claim 1 from an alkoxylated glycerol of the formula IIa, IIb, or IIc, wherein AO, EO, PO, nl, n2, n3, ml, m2, m3, pl, p2L and p3 are each as defined in claim 1, and (meth)acrylic acid, comprising the steps of

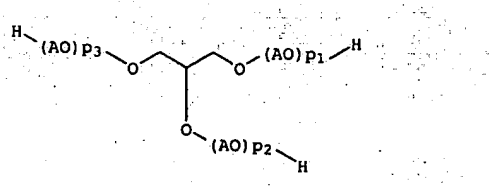
a) reacting the alkoxylated glycerol with the (meth)acrylic acid in the presence of at least one esterification catalyst C, at least one polymerization inhibitor D, and optionally a water-azeotroping solvent E to form the ester F,

b) optionally removing from the reaction mixture some or all of the water formed in a), during and/or after a),

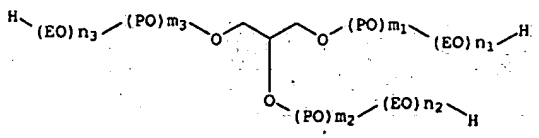
f) optionally neutralizing the reaction mixture,

h) when a solvent E is used, optionally removing the solvent E by distillation, and/or

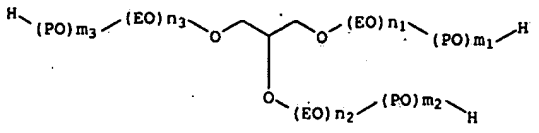
i) stripping with a gas which is inert under the reaction conditions.



IIa



IIb



IIc

Barthold et al. (col. 8, line 65 to col. 9, line 40; col. 9, Table 1; col. 11, Table 3) disclose a process for preparing the compound ester F as claimed. Regarding the claimed "stripping with a gas which is inert under the reaction conditions", since Barthold et al. col. 10, line 52 to col. 11, line 2) clearly disclose the stipping of water under a nitrogen atmosphere, the examiner has a reasonable basis that the claimed "stripping with a gas which is inert under the reaction conditions" has been met by Barthold et al.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barthold et al. (US 5,472,617).

Set forth from paragraph 7 of instant office action, the process of Barthold et al. is very similar to the process of claims 11-13.

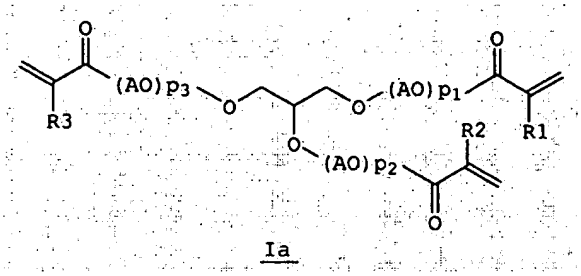
The difference between the invention of claims 11-13 and Barthold et al. is that Barthold et al. do not disclose minor variations of the process as claimed.

Nevertheless, Barthold et al. (col. 8, line 65 to col. 9, line 40; col. 9, Table 1; col. 11, Table 3) have clearly disclosed a process for preparing the compound ester F as claimed. Therefore, the examiner believes that it would have been obvious to one of ordinary skill in art to use "routine experimentation" technique to optimize the process of Barthold et al. to obtain the invention of claims 11-13. In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

10. Claims 14-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Barthold et al. (US 5,472,617).

The invention of claims 14-17 relates to a process for preparing a crosslinked hydrogel and product thereof, comprising the steps of

k) polymerizing an ester F of claim 1or an ester F of the formula Ia



Ia

wherein AO is for each AO independently EO or PO,

EO is O-CH2-CH2-,

PO is at each instance independently O-CH2-CH(CH3)- or O-CH(CH3)-CH2-

P1 + p2 + p3 is 3, 4, or 5,

R1, R2, and R3 are independently H or CH3,

with (meth)acrylic acid, optionally an additional monoethylenically unsaturated compound N, and optionally one further copolymerizable hydrophilic monomer M, in the presence of at least one free-radical initiator K and optionally

of at least one grafting base L,

l) optionally postcrosslinking the reaction mixture obtained from k),

m) drying the reaction mixture obtained from k) or i), and

n) optionally grinding and/or sieving the reaction mixture obtained from k), l), or m).

Barthold et al. (col. 8, line 65 to col. 9, line 40; col. 9, Table 1; col. 11, Table 3) disclose a process for preparing the compound ester F as claimed. Further, Barthold et al. (col. 13, Table 4; col. 16-17, claim 1) clearly teach the copolymerization of the prepared compound with a methacrylic acid or acrylic acid. Barthold et al. contain all the limitations of claims 14-17. Therefore, Claims 14-17 are anticipated.

11. Claims 18, 21-23 are rejected under 35 U.S.C. 102(b) as anticipated by Barthold et al. (US 5,472,617).

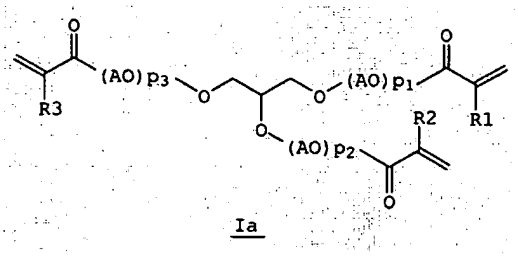
The invention of claims 18 relates to a crosslinked hydrogel comprising at least one hydrophilic monomer M in polymerized form crosslinked with an ester F of claim 1 or an ester F of formula Ia, wherein AO is for each AO independently EO or PO,

EO is O-CH2-CH2-,

PO is at east instance independently O-CH2-CH(CH3)- or O-CH(CH3)-CH2-

p1+ p2 + p3 is 3, 4, or 5,

R1, R2, and R3 are independently H or CH3.



Ia

The invention of claim 21-23 relates to a composition comprising from 0.1% to 40% by weight of at least one ester F of claim 1 or an ester F of formula Ia, wherein AO is for each AO independently EO or PO,

EO is O-CH2-CH2-

p1 + p2 + p3 is 3, 4, or 5,

R1, R2, and R3 are independently H or CH3, and (meth)acrylic acid,

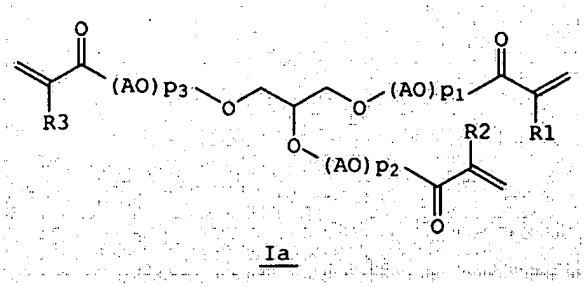
0.5-99.9% by weight of at least one hydrophilic monomer M,

0-10% by weight of at least one esterification catalyst C,

0-5% by weight of at least one polymerization inhibitor D, and

0-I0% by weight of a solvent E,

with the proviso that the sum total is always 100% by weight.



Ia

Barthold et al. (col. 8, line 65 to col. 9, line 40; col. 9, Table 1; col. 11, Table 3) disclose a process for preparing the compound ester F as claimed. Further, Barthold et al. (col. 13, Table 4; col. 16-17, claim 1) clearly teach the copolymerization of the prepared compound with a methacrylic acid or acrylic acid. Barthold et al.

Although the main teachings of Barthold et al. is prepared a resin as oil demulsifiers for the rapid dehydration of crude oil (col. 1, line 10-15), Barthold et al. (col. 1, line 52-62) teach that all these disclosed resin can be easily gelled. Since Barthold et al. (col. 18, claims 6, 10) disclose that the composition can comprise water ranging from 1 to 99 %, the examiner has a reasonable basis that the claimed "diluent" has been met by Barthold et al. Further, since the composition of Barthold et al. can be in the form of a gel and contain water, the examiner has a reasonable basis that the claimed hydrogel feature has been met by Barthold et al.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 26, 27, 29, 30, 32-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Barthold et al. (US 5,472,617).

The invention of claims 26, 27, 29, 30, 32-34 relates to a polymer prepared by the process of claim 14.

Barthold et al. (col. 8, line 65 to col. 9, line 40; col. 9, Table 1; col. 11, Table 3) disclose a process for preparing the compound ester F as claimed. Further, Barthold et

al. (col. 13, Table 4; col. 16-17, claim 1) clearly teach the copolymerization of the prepared compound with a methacrylic acid or acrylic acid. Barthold et al.

Although the main teachings of Barthold et al. is prepared a resin as oil demulsifiers for the rapid dehydration of crude oil (col. 1, line 10-15), Barthold et al. (col. 1, line 52-62) teach that all these disclosed resin can be easily gelled. Since Barthold et al. (col. 18, claims 6, 10) disclose that the composition can comprise water ranging from 1 to 99 %, the examiner has a reasonable basis that the claimed "diluent" has been met by Barthold et al. Further, since the composition of Barthold et al. can be in the form of a gel and contain water, the examiner has a reasonable basis that the claimed hydrogel feature has been met by Barthold et al.

Regarding the claimed saponification indexes, in view of the substantially identical composition of Barthod et al. and the composition as claimed, the examiner has a reasonable basis that the claimed saponification indexes are inherently possessed in Barthold et al. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

In view of the 112 rejection set forth, the instant rejection is adequate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

William K. Cheung, Ph. D.

Primary Examiner

April 12, 2007

WILLIAM K. CHEUNG
PRIMARY EXAMINER